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TECHNICAL MEMORANDUM REGARDING U S NAVY RESPONSE TO REGULATORY
COMMENTS TO DRAFT SUPPLEMENTAL REMEDIAL INVESTIGATION SITE 16 OPERABLE
UNIT 1 (OU1) MCAS CHERRY POINT NC
2/17/2012
CH2M HILL

Response to Comments

Draft Supplemental Remedial Investigation, Site 16, Operable Unit 1

Marine Corps Air Station Cherry Point, North Carolina

PREPARED FOR: MCAS Cherry Point Partnering Team

PREPARED BY: CH2M HILL

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This technical memorandum presents the responses to regulatory agency comments received regarding the Draft Supplemental Remedial Investigation, Site 16, Operable Unit 1 prepared by CH2M HILL and dated October 2011. On January 23, 2012, comments were received from the United States Environmental Protection Agency (USEPA) Region 4 by email. On January 18, 2012, comments were received from the North Carolina Department of Environment and Natural Resources (NCDENR) by email. Responses to each individual comment are provided below.

USEPA Comments

1. Listed below are statements extracted from the Draft Supplemental Remedial Investigation. Clarifying text should be added to the document addressing the soil contamination. See below explanations:

1a. Page 3-3, Volatile Organic Compounds – This paragraph identifies vinyl chloride as being detected above the North Carolina soil screening levels, it further states that vinyl chloride was not detected during a re-sampling event. The text even goes further to state that the vinyl chloride in soil is related to the groundwater contamination and will be addressed separately.

“Vinyl chloride was detected above the NC SSL at only one subsurface soil location immediately north of Site 16, adjacent to Sandy Branch (Figure 3-2). This sample was collected at a depth of 0.5 to 2.5 feet bgs in an area with a very shallow water table. A confirmation sample was collected in 2000 at the same location, and vinyl chloride was not detected. Vinyl chloride observed in soil is related to the chlorinated VOC groundwater plume in the area (TetraTech, 2002), which is being addressed separately.”

1b. Page 5-1, Environmental Media Contamination, VOCs - Vinyl chloride observed in soil will be addressed separately as part of the OU1 Central Groundwater Plume FS.

“Vinyl chloride observed in soil was concluded to be to the result of the chlorinated VOC groundwater plume from upgradient sources and will therefore be addressed separately as part of the OU1 Central Groundwater Plume FS.”

These statements are somewhat misleading. The above statements are suggesting that the soil contamination is connected to the groundwater plume; however, it does not address the remediation of the soils. Are the soils contaminated and if so how are they being remediated (the OU1 Central Groundwater Plume FS does not address soil contamination)? It further states that the sample was collected in an area with a very shallow water table. What does this mean? Text should be added that explains the soil conditions in this area and emphasize that the original sample was collected in 1990. The 2000 re-sampling event did not detect vinyl chloride in the soils. It should also be noted that this location is not within the boundary of the Site 16 landfill and this area was not identified as receiving waste materials.

Navy Response:

The document will be revised to clarify there is no soil contamination at Site 16.

1a: The paragraph addressing vinyl chloride within the nature and extent section for soil will be revised to read: “Historically, vinyl chloride has been detected above the NC SSL at only one subsurface soil location immediately north and outside of the Site 16 boundary, adjacent to Sandy Branch (**Figure 3-2**). This area is outside of the disposal areas and was not identified as receiving waste materials. The affected sample was collected during RFI activities in 1990 at a depth of 0.5 to 2.5 feet bgs in an area with a very shallow water table. It was suspected that the vinyl chloride detection was the result of a sample collected within the capillary fringe above the water table or where earlier groundwater level fluctuations had impacted soil immediately above the water table. As a result, a confirmation sample was collected in 2000 at the same location and vinyl chloride was not detected, verifying that the soil is not contaminated in this area. Since there is no evidence of waste disposal at this location, it is believed the vinyl chloride observed in the earlier soil sample is actually related to groundwater contaminant migration associated with the chlorinated VOC groundwater plume from upgradient sources (TetraTech, 2002) and the result of possible groundwater table fluctuations.”

Further, in response to discussion at the January partnering meeting, a footnote will be added to the vinyl chloride concentration on Table 3-1 that reads: “It was concluded in the RI for OU1 (TetraTech, 2002) that this result is not representative of soil but rather groundwater contamination from migration of the chlorinated VOC plume from upgradient sources and possible fluctuations of a shallow groundwater table. A confirmation sample was collected in 2000 at the same location, and vinyl chloride was not detected, verifying that soil is not contaminated in this area.”

1b: The bullet addressing vinyl chloride within environmental media contamination conclusions will be revised to read: “Vinyl chloride was concluded to be to the result of groundwater contaminant migration associated with the chlorinated VOC groundwater plume from upgradient sources and will therefore be addressed separately as part of the OU1 Central Groundwater Plume FS.”

NCDENR Comments

1. Page 2-2, Note inserted for: "Between 1946 and 1948, up to 20,000 gallons of waste oil, one or more 55-gallon drums of potassium cyanide, and unspecified quantities of other wastes (municipal-type refuse) were reportedly disposed of at Site 16 (Water and Air Research, 1983)." - Have we ever in the past tested the soil and GW for waste oil constituents or potassium cyanide? Do we have a clue where these may have been dumped at site 16? We shouldn't just say things like this and not mention them again or explain that these were never found in the soil or GW. It sends up a red flag.

Navy Response: The document will be revised to communicate that sampling for constituents associated with the reported wastes did occur. The following statement will be added: "The OU1 RI Report determined through sampling and analysis whether specific constituents identified in the IAS, and other possible contaminants, existed at concentrations considered to be hazardous (TetraTech, 2002)."

2. Page 2-4, Note inserted for: "A CERCLA Time-Critical Removal Action (TCRA) was conducted at Site 16 in 1997 related to the numerous debris piles, tanks, empty storage vessels, and other construction debris that were documented during the RFI activities. Asbestos-containing material, debris, and soil contaminated with petroleum hydrocarbons, asbestos, and lead were removed for offsite disposal." - Do we know if this is part of the 20,000 gallons of waste oil that was disposed of at this site or was this additional petroleum hydrocarbons? How much soil was removed for offsite disposal?

Navy Response: The document will be revised to clarify the amount and location of materials removed. The possible disposal of up to 20,000 gallons of waste oil was evaluated through sampling and analysis in the OU1 RI, where this removal action specifically addressed the debris piles located in the southeastern portion of the site.

3. Page 3-6, Note inserted for: "The 2002 OU1 RI concluded that the detected manganese and iron concentrations at Site 16 represented natural conditions and not site-related contamination; and that the detections of thallium in the groundwater at OU1 above regulatory criteria appear to be the result of false positives reported by the laboratory method." - Explain why this was concluded. Your opening sentence indicated that iron and manganese were above 2 times the average base wide background. Did they fall within the range of values? Explain.

Navy Response: The document will be revised to include clarifying discussion of the conclusions that manganese and iron concentrations represent natural conditions and elevated concentrations of thallium are due to problems with the laboratory method. The following statement will be added: "In the OU1 RI Report, manganese and iron were the two inorganics detected above regulatory criteria most frequently within the surficial aquifer (over 60 detections of manganese above criteria, over 40 detections of iron above criteria). In addition to comparisons of sample data for these constituents to background concentrations, it was concluded that the widespread distribution of similar concentrations above criteria for these two constituents, across all of OU1 rather than in the form of a plume, indicates that they are naturally occurring at the concentrations found at Site 16. Detections of thallium in the groundwater at OU1 above regulatory criteria appear to be the result of false positives that have been attributed to the utilized CLP laboratory method

which has been acknowledged by EPA to result in elevated concentrations for arsenic, lead, and thallium (TetraTech, 2002)."

4. Table 3-1 - Why is Benzene J flagged? Was there matrix interference?

Navy Response: The flag is due to one or more of the other target compounds being present at a high enough concentration that the sample had to be diluted by the lab.